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EXAMINER
TRUONG, CAMQUY

ART UNIT	PAPER NUMBER
2195	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

		Application No.	Applicant(s)
		10/670,842	AGUILAR ET AL.
Office Action Summary		Examiner	Art Unit	
		Camquy Truong	2195	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>10 October 2007</u>.

2a)☒ This action is **FINAL.**   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>*1-30*</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>*1-30*</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date <u>*7/6/07, 10/2/07*</u>.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application

6)☐ Other: _____ .

DETAILED ACTION

1.   Claims 1-30 are presented for examination.

Claim Rejections - 35 USC § 112

2.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly
> claiming the subject matter, which the applicant regards as his invention.

3.   Claims 1-10 are rejected under 35 U.S.C 112, second paragraph, as being

indefinite for failing to particularly point out and distinctly claim the subject matter which

applicant regards as the invention.

      A.   The claim language in the following claims is not clearly understood

          i. As to claim 1, line 3, it is not clearly understood whether " a file" refers to

      "software" in line 1.

          ii. As to claim 2, line 2, it is not clearly understood whether " a program"

      refers to "software" or " file" in claim 1.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as
> set forth in section 102 of this title, if the differences between the subject matter sought to be
> patented and the prior art are such that the subject matter as a whole would have been obvious

at the time the invention was made to a person having ordinary skill in the art to which said
subject matter pertains. Patentability shall not be negatived by the manner in which the invention
was made.

4.   Claims 1, 3, 7-10, 21, 23, 27-30 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Ansari et al. (U.S. Patent 6473897) in view of D.'Souza (U.S. Patent

6,446,218 B1).

5.   As to claims 1, and 21, Ansari teaches the invention substantially as claimed

including: method for loading software on a plurality of processors, said method

comprising:

retrieving a file using a first processor (software program/ high level code is input

to a compiler of computer, col. 4, lines 49-54);

extracting a processor identifier from the file, the processor identifier

corresponding to the file (the compiler is able to search through the program to identify

each of the different processor-specific construct which includes each of the processor

types listed in the cpu_specific construct, col.7, lines 3-53) ;

determining whether to load the file on a second processor based upon whether

the processor identifier correspond to the second processor (testing to identify

processor type, col. 8, lines 9-17; col. 9, lines 12-60); and

loading the file onto the second processor in response to the determination (the

software code jumps to ... the identified processor type, col. 12, lines 61-64; col. 9, lines

12-33).

6.   Ansari does not explicitly teach plurality of processors in a heterogeneous

processor environment. However, D'Souza teach plurality of processors in a

heterogeneous processor environment (each cluster may be heterogeneous, col. 7,

lines 1-16; col. 9, lines 41-49).

7.   It would have been obvious to one of ordinary skill in the art at the time the

invention was made to incorporate the teaching of plurality of processors in a

heterogeneous processor environment as taught by D'Souza to the invention of Fischer

because this allow to improve scalability and efficiency for a clustered computer system.

8.   As to claims 3, and 23, Ansari teaches the file is an executable file (col. 4, lines

49-53).

9.   As to claims 7, and 27, Ansari teaches the processor identifier is a machine

type(col. 7, lines 3-21), the determining further comprising: extracting the machine type

from the file (the compiler is able to search through the program to identify each of the

different processor-specific construct which includes each of the processor types listed

in the cpu_specific construct, col.7, lines 3-53; and comparing the machine type to a

plurality of machine types (col. 13, lines 13-56).

10.   As to claim 8-9, and 28-29, Ansari teaches the file is part of a combined file, and

wherein the combined file includes one or more processor identifiers that correspond to

the first processor (col. 7, lines 3-34).

11.   As to claims 10, and 30, Ansari teaches the first processor is a processing unit

and wherein the second processor is a synergistic processing unit (col. 7, lines 3-21).

12.   Claims 6, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Ansari et al. (U.S. Patent 6473897) in view of D'Souza (U.S. Patent 6,446,218 B1),

as applied to claims 1 and 21 above, and further in view of Zwirner (U.S. Patent

Publication 20040181785).

13.   As to claims 6, and 26, Ansari and D'Souza do not explicitly teach the executable

file is in a file format, and wherein the file format is selected from the group consisting of

an ELF format, an XCOFF format, and a PECOFF format. However, Zwinner teaches

the executable file is in a file format, and wherein the file format is selected from the

group consisting of an ELF format, an XCOFF format, and a PECOFF format

(paragraph 37).

14.   It would have been obvious to one of ordinary skill in the art at the time the

invention was made to incorporate the teaching of executable file is in a file format, and

wherein the file format is selected from the group consisting of an ELF format, an

XCOFF format, and a PECOFF format as taught by Zwirner because this allows code

optimization modules to be plugged into either subsystems to further increase the

performance of the system.

15.   Claims 2, 4-5, 11-15, 17-20, 22, 24-25 are rejected under 35 U.S.C. 103(a) as

being unpatentable over Ansari et al. (U.S. Patent 6473897) in view of D'Souza (U.S.

Patent 6,446,218 B1), and further in view of Odinak et al. (U.S. Patent Publication

2005/0081187).

16.   As to claim 11, Ansari teaches the invention substantially as claimed including:

An information handling system comprising:

        a memory accessible by the plurality of processors (jump instruction transfer

program to the memory of the processor, col. 9, lines 12-33);

        retrieving a file using a first processor (software program/ high level code is input

to a compiler of computer, col. 4, lines 49-54);

        extracting a processor identifier from the file, the processor identifier

corresponding to the file (the compiler is able to search through the program to identify

each of the different processor-specific construct which includes each of the processor

types listed in the cpu_specific construct, col.7, lines 3-53) ;

        determining whether to load the file on a second processor based upon whether

the processor identifier correspond to the second processor (testing to identify

processor type, col. 8, lines 9-17; col. 9, lines 12-60); and

loading the file onto the second processor in response to the determination (the

software code jumps to ... the identified processor type, col. 12, lines 61-64; col. 9, lines

12-33).

17.   Ansari does not explicitly teach plurality of processors in a heterogeneous

processor environment. However, D'Souza teach plurality of processors in a

heterogeneous processor environment (each cluster may be heterogeneous, col. 7,

lines 1-16; col. 9, lines 41-49).

18.   It would have been obvious to one of ordinary skill in the art at the time the

invention was made to incorporate the teaching of plurality of processors in a

heterogeneous processor environment as taught by D'Souza to the invention of Ansari

because this allow to improve scalability and efficiency for a clustered computer system.

19.   Ansari and D'Souza do not explicitly teach nonvolatile storage devices accessible

by the plurality of processors. However, Odinak teaches nonvolatile storage devices

accessible by the plurality of processors (one or more computer readable media access

file system to retrieve the files from non-volatile memory 106, paragraph 74; claim 1,

lines 1-10).

20.   It would have been obvious to one of ordinary skill in the art at the time the

invention was made to incorporate the teaching of nonvolatile storage devices

accessible by the plurality of processors as taught by Odinak to the invention of Ansari

and D'Souza because this allow for bytecode and data for the applets are compiled and

stored as a single entity within one or more segments of non-volatile memory as a result

of storage of the applets themselves are optimized.

21.   As to claim 12, Odinak teaches teach executing a program on the first processor

(an application 212 executing on a host system, paragraph 31, lines 3-4; paragraph 73,

lines 8-10); loading a runtime loader onto the first processor in response the execution

(loading runtime environment applet upon executing application, paragraph 31, lines 1-

4; paragraph 73, lines 4-6); and performing the retrieving, detecting, and the

determining using the runtime loader (performing identifying at least one code file and

one data file, paragraph 31, lines 4-5; paragraph 74).

22.   As to claim 13, Ansari teaches the file is an executable file file (col. 4, lines 49-

53).

23.   As to claims 14-15, Odinak teaches sending a plug-in to the second processor

using the first processor (claim 2, lines 4-6), the plug-in corresponding to the file (IC

card receive command in form Execute (code-filename, data filename, paragraph 73);

sending data to the second processor using the first processor (passes the received file

names (codefile1, datafile3) to file system to retrieve the file from memory, paragraph

74) the data corresponding to the plug-in (IC card receive command in form Execute

(code-filename, data filename, paragraph 73); and processing the data with the plug-in

using the second processor (the identified code file is executed until reference to
required data is reached, paragraph 74).

24.   As to claim 17, Ansari teaches the processor identifier is a machine type(col. 7,
lines 3-21), the determining further comprising: extracting the machine type from the file
(the compiler is able to search through the program to identify each of the different
processor-specific construct which includes each of the processor types listed in the
cpu_specific construct, col.7, lines 3-53; and comparing the machine type to a plurality
of machine types (col. 13, lines 13-56).

25.   As to claims 18-19, Ansari teaches the file is part of a combined file, and wherein
the combined file includes one or more processor identifiers that correspond to the first
processor (col. 7, lines 3-34).

26.   As to claim 20, Ansari teaches the first processor is a processing unit and
wherein the second processor is a synergistic processing unit (col. 7, lines 3-21).

27.   As to claims 2, and 22, Odinak teaches teach executing a program on the first
processor (an application 212 executing on a host system, paragraph 31, lines 3-4;
paragraph 73, lines 8-10); loading a runtime loader onto the first processor in response
the execution (loading runtime environment applet upon executing application,
paragraph 31, lines 1-4; paragraph 73, lines 4-6); and performing the retrieving,

detecting, and the determining using the runtime loader (performing identifying at least one code file and one data file, paragraph 31, lines 4-5; paragraph 74).

28.   As to claims 4-5, and 24-25, Odinak teaches sending a plug-in to the second processor using the first processor (claim 2, lines 4-6), the plug-in corresponding to the file (IC card receive command in form Execute (code-filename, data filename, paragraph 73); sending data to the second processor using the first processor (passes the received file names (codefile1, datafile3) to file system to retrieve the file from memory, paragraph 74) the data corresponding to the plug-in (IC card receive command in form Execute (code-filename, data filename, paragraph 73); and processing the data with the plug-in using the second processor (the identified code file is executed until reference to required data is reached, paragraph 74).

29.   Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ansari et al. (U.S. Patent 6473897) in view of D'Souza (U.S. Patent 6,446,218 B1), and further in view of Odinak et al. (U.S. Patent Publication 2005/0081187), as applied to claim 21 above, and further in view of Zwirner (U.S. Patent Publication 20040181785).

30.   As to claim 16, Ansari, D'Souza, and Odinak do not explicitly teach the executable file is in a file format, and wherein the file format is selected from the group consisting of an ELF format, an XCOFF format, and a PECOFF format. However, Zwirner teaches the executable file is in a file format, and wherein the file format is

selected from the group consisting of an ELF format, an XCOFF format, and a PECOFF

format (paragraph 37).

31.   It would have been obvious to one of ordinary skill in the art at the time the

invention was made to incorporate the teaching of executable file is in a file format, and

wherein the file format is selected from the group consisting of an ELF format, an

XCOFF format, and a PECOFF format as taught by Zwirner because this allows code

optimization modules to be plugged into either subsystems to further increase the

performance of the system.

Response to the argument

32.   Applicant's arguments filed 10/10/07 for claims 1-30 have been considered but are moot

in view of the new ground(s) rejection.

        Applicant's amendment necessitated the new ground(s) of rejection presented in this

Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

        A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory

action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the

mailing date of the advisory action. In no event, however, will the statutory period for reply

expire later than SIX MONTHS from the date of this final action.

Conclusion

33. Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Camquy Truong whose telephone number is (571) 272-

3773. The examiner can normally be reached on 8AM – 5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Meng-Ai An can be reached on 571-272-3756. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-3756.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR of Public PAIP. Status

information for unpublished applications is available through Private PAIR only. For

more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you

have questions on access to the Private PAIP system, contact the Electronic Business

Center (EBC) at 866-217-9197(toll-free).

October 16, 2007

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